DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-002643
Date Inspected: 10-May-2008

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 630
OSM Departure Time: 1530
Location: Shanghai, China

CWI Name:	Chen Chih Ming			**CWI Present:**	☑ Yes	☐ No	
Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☐ Yes	☑ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Approved WPS:**	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: OBG

Summary of Items Observed:

Caltrans Quality Assurance (QA) Inspector Sherri Brannon arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China to periodically monitor welding and Quality Control (QC) functions. While on site the QA Inspector observed and/or discovered the following.

OBG Assembly

Bay 2 - OBG Assembly:
QA Inspector Brannon randomly observed ZPMC personnel performing heat straightening on various side/bottom plates segments. Cause for heat straightening welding distortion. Heat Straightening is performed by flame straightening using oxygen acetylene with a hand torch.

Bay 2-OBG bottom panel (repair)
QA Inspector Brannon randomly observed ZPMC qualified welder Mr. Dan De Yin ID#044795 repair welding back side of weld joint for Segment020A-004 joining BP22A to BP23A. Mr. Dan was observed welding in the 1G (flat) position utilizing a flux corded arc welding (FCAW) process with a 1.4mm diameter electrode, filler metal brand E71T-1, class Supercored 71H, semi automatic. QA Inspector Brannon observed the ZPMC QC Inspector Mr. Chen Chih Ming verifying that the welding parameters and pre-heat were in accordance with the Welding Procedure Specification (WPS). QA Inspector Brannon observed preheat and welding parameters measured by the QC CWI Inspector Mr. Chen Chih Ming to be: a minimum preheat temperature of 70°C and welding parameters amps of 280, volts of 29.0, a travel speed of 480 mm/min and a gas flow of 22L. Welding parameters observed by QA Inspector Brannon appear to be in general compliance with the approved WPS-345-FCAW-1G-FCM-Repair.

Also see, ZPMC welding repair report B-WR317.

Bay 2-OBG side panel (repair)
QA Inspector Brannon randomly observed ZPMC qualified welder Mr. Jin Cheng Mao ID#058551 repair welding back side of weld joint for Segment020A-002 joining SP24A to SP32A. Mr. Jin was observed welding in the 1G (flat) position utilizing a flux corded arc welding (FCAW) process with a 1.4mm diameter electrode, filler metal brand E71T-1, class Supercored 71H, semi automatic. QA Inspector Brannon observed the ZPMC QC Inspector Mr. Chen Chih Ming verifying that the welding parameters and pre-heat were in accordance with the Welding Procedure Specification (WPS). QA Inspector Brannon observed preheat and welding parameters measured by the QC CWI Inspector Mr. Chen Chih Ming to be: a minimum preheat temperature of 70°C and welding parameters amps of 249, volts of 28.9, a travel speed of 482 mm/min and a gas flow of 23L. Welding parameters observed by QA Inspector Brannon appear to be in general compliance with the approved WPS-345-FCAW-1G-FCM-Repair. Also see, ZPMC welding repair report B-WR318.

Bay 2-OBG side panel (repair)
QA Inspector Brannon randomly observed ZPMC qualified welder Mr. Li Xiao Jie ID#047856 repair welding back side of weld joint strong back connections for Segment017A-006 joining SP60A to SP484. Mr. Lin was observed welding in the 1G (flat) position utilizing a shielded metal arc welding (SMAW) process with a 4.0mm diameter electrode, filler metal brand E7018, class TL-508, manual. QA Inspector Brannon observed the ZPMC QC Inspector Mr. Chen Chih Ming verifying that the welding parameters and pre-heat were in accordance with the Welding Procedure Specification (WPS). QA Inspector Brannon observed preheat and welding parameters measured by the QC CWI Inspector Mr. Chen Chih Ming to be: a minimum preheat temperature of 20°C and welding parameters amps of 180. Welding parameters observed by QA Inspector Brannon appear to be in general compliance with the approved WPS-345-SMAW-1G/1F-Repair. Also see, ZPMC welding repair report B-WR330.

Bay 2-OBG floor beam diaphragm splice plate:
QA Inspector Brannon randomly observed ZPMC qualified welder Mr. Fei Cheng Xiang ID#066239 groove (PJP) welding floor beam diaphragm splice plate connection for FB003-006 weld joint SSD16-PP020-005 & 006. Mr. Lin was observed welding in the 3G (vertical) position utilizing a flux cored arc welding (FCAW) process with a 1. 4mm diameter electrode, filler metal brand E71T-1, class Supercored 71H, semi automatic. QA Inspector Brannon observed the ZPMC QC Inspector Mr. Chen Chih Ming verifying that the welding parameters and pre-heat were in accordance with the Welding Procedure Specification (WPS). QA Inspector Brannon observed preheat and welding parameters measured by the QC CWI Inspector Mr. Chen Chih Ming to be: a minimum preheat temperature of 60°C and welding parameters amps of 210, volts of 25.0, a travel speed of 103 mm/min and a gas flow of 22L. Welding parameters observed by QA Inspector Brannon appear to be in general compliance with the approved WPS-B-P-2233-Tc-U4b-F.

Bay 2 – side & bottom panel segments:
ZPMC NDT (MT):
QA Inspector Brannon observed ZPMC magnetic particle (MT) technician Mr. Bo Ting Rui, Mr. Zhou Dong Yun and Mr. Cai Xin Xin performing (MT) at SEG014A-004 (accept), SEG014A-018 (accept), SEG020A-015 (accept), SEG014A-023 (accept), SEG014A-004 (accept),and SEG020A-007 (accept). QA Inspector Brannon observed accept and rejected marked on the side/ bottom panels.

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

The following digital photograph below illustrates observation of the activities being performed.

Summary of Conversations:

No relevant conversations to report.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Brannon,Sherri	Quality Assurance Inspector
Reviewed By:	Carreon,Albert	QA Reviewer